DVR

4/8/16-CH NETWORK DIGITAL VIDEO RECORDER

USER'S MANUAL

ADVICES

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NOTES

All functions of full-edition model are described in this Manual.
Half-edition model is only equipped with some of its functions.

GUI MOTION IR SCHEDULE CMS MOBILE AUDIO MOUSE PTZ USB IE SATA VGA LOOP SPOT DVD-RM

CAUTIONS

- In order to ensure your rights and interests, please read this manual carefully before you install and use the DVR.
- Use the appropriate adapter for the DVR.
- To protect the main chip from thunder striking, please make sure the ground wire is correctly connected before using the DVR.
- Do not expose the DVR to rain or use it under high humidity circumstance.
- This DVR cannot be installed at the places with much dust, and avoid potential mechanical vibration or impact.
- Install this DVR under good air circulation conditions. Do not place it near the heater or under direct sunlight.
- Please choose high quality hard disk (HDD), which could meet the working demand of the DVR.
- For its quality, please purchase hard disk from regular merchants, and do not use the Western Digital hard disk.

- Before connecting to other facilities, please disconnect the power supply and pull the power line plug out from the power socket.
- In case of any solid or liquid coming into the case, please disconnect the power supply immediately, and the DVR can be restarted only after being checked by qualified servicemen.
- If the DVR is not in use for a long period of time, please disconnect the power supply and pull the power line plug out from the power socket.
- This is a precise instrument. No internal part can be repaired by the users. If fault occurs, it is necessary to ask qualified servicemen to repair it or contact the dealer.

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Chapter I Product Introduction

1.1 Summary

This equipment is a standalone digital hard disk video recorder specially designed for security. It adopts the embedded processor and embedded operating system and integrates with latest technologies in IT field, such as video frequency/audio frequency compression/decompression, large capacity hard disk storage, TCP/IP net work remote control etc., investing the system with high intellectualization and stability.

This equipment supports various networks including Ethernet and Internet to realize remote audio/video synchronization. With easy operation, it can be applied to the security for banks, telecom, schools, hospitals, supermarkets, residential quarters, factories, companies, warehouses, restaurants, hotels, parks, museums, water conservancy facilities, entertainment places and other fields.

1.2 Functions and features

- Support PAL & NTSC video signal input.
- Support OSD languages of multiple countries.
- Support external alarm, motion detection and time recording.
- Support audio recording, audio playing and live mode listening.

- If the electricity suddenly off while recording, it will record automatically when power on.
- Support CMS
- Support DDNS
- Support network preview, playback, setup, remote recording, PTZ control and camera name setup.
- Support IE browsing and Network remote Client.
- Support Internet backup ,USB backup.
- Support mouse operation with high sensitivity
- Support DVD-RW and 1000G hard disk
- Support VGA output
- Support remote control
- Convenient & precise video searching
- Control PTZ and speed dome through RS485
- Specially designed dedicated file system for video to increase more than 10 times of service life of hard disk
- Fully independent from PC platform and free from computer breakdown due to improper operations, complicated management & operations as well as virus infection, and with high stability
- Operating system: Linux
- Compressed chip: SOC

Chapter II Operation Instructions

2.1 Description of front panel

No.	Name	Icon	Description
1	Power		Press it to turn on/off the DVR. The same as the "⏻" key in the remote control.
2	Number keys	1 ~ 9 0/10 +	a) input numbers b) keystroke 1~9 : select channels. c) [0/10+]: input the number "0". Press it twice to select channel 10. Combined number keys 1~9 to select the channels from channel 11 to 16. d) input password

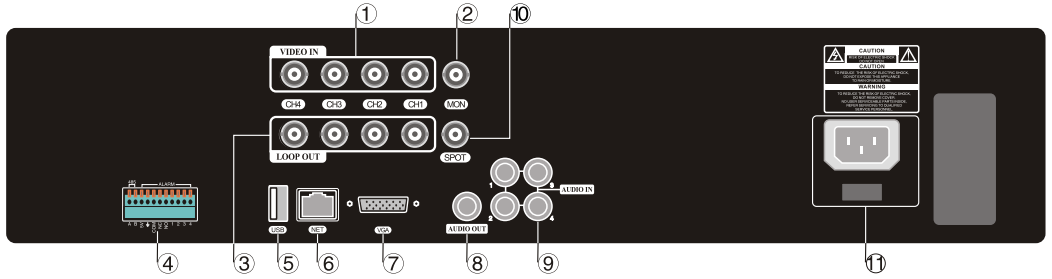
❸	LED Indicator light	REC	Record LED indicator light. It is on in recording mode.
		IR	Remote signal receiver LED indicator light. It is on in remote control usable mode.
		ALARM	Alarm LED indicator light. It is on when alarm happened.
		NET	Network LED indicator light. It is on in network connection mode.
		LOCK	Lock LED indicator light. It is on in locking mode.
		HDD	Hard drive LED indicator light. It is flash when hard drive is being used.
❹	IR Receiver	◌	Receive signal from remote control. (Do not cover).
❺	Record	●	Start recording. In PTZ mode, it is used as [Z+] key in the remote control.
	Playback/ Pause	▶I	Press it to pop up search menu, select a video file to play. Press it to pause in the process of playback, press it again to play again. In PTZ mode, it is used as [Z-] key in the remote control.
	Stop	■	In playback mode, press it to stop playing and return to search menu; in video recording mode, press it to stop recording; in PTZ mode, press it to view preset image.
	Search	🔍	Press it to enter search menu. In PTZ mode, press it to set preset image.

❺	PTZ	PTZ	Press it to enter PTZ mode, press again to exit.
	Backup	COPY	Press it to enter backup menu.
	Information	INFO	Press it to enter system information menu.
	Exit	ESC	Press it to exit from the inferior menu and return to the superior menu. In record/playback mode, press it to turn back to live mode.
	Sequence	SEQ	In live preview mode, press this key to switch full screen images by sequence.
	Audio	AUDIO	Press it to pop up audio setup menu.
	Menu	MENU	Press it to pop up the main menu
	SPOT output	SPOT	Press it to pop up SPOT setup menu.
	Lock	LOCK	Lock the machine.
	Direction / split/ confirm keys	▲ ▼ ◀◀ ▶▶ ↵	a)【▲】【▼】【◀◀】【▶▶】are direction keys. In menu mode, select the listed options upward/downward/leftward/rightward; in PTZ control mode, control the dome to rotate upward/downward/leftward/rightward.【↵】confirm the selection and operation. b)【▲】【↵】【▼】could be Quad, nine-split-screen and16-split-screen key in live mode. c)【◀◀】【▶▶】rewind and forward in playback mode. Change the parameters value in menu mode.

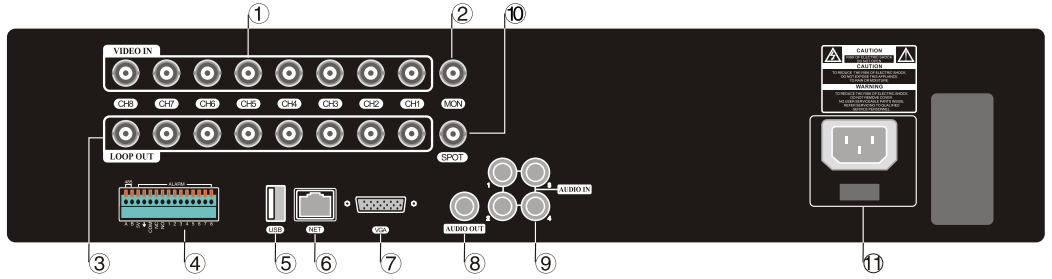
6	Shuttle		In playback mode: rotate the shuttle outer ring Leftward / rightward once to fast backward/forward at 2× speed, rotate it twice to play at 4× speed; Rotate it third time to play at 8× speed, four times for 16×, five times for32×, six times for 64×,In menu mode: rotate the shuttle outer ring leftward/rightward once to in crease/decrease the set value, rotate it leftward /rightward to the end to increase/ decrease the set value successively; rotate the inner ring leftward/rightward to move the cursor upward/downward.
7	USB port		Connected to USB disk and used for system software upgrade or video file backup. Insert the U disk after turn off the DVR. **You'd better not connect the mouse here.**

2.2 Description of rear panel

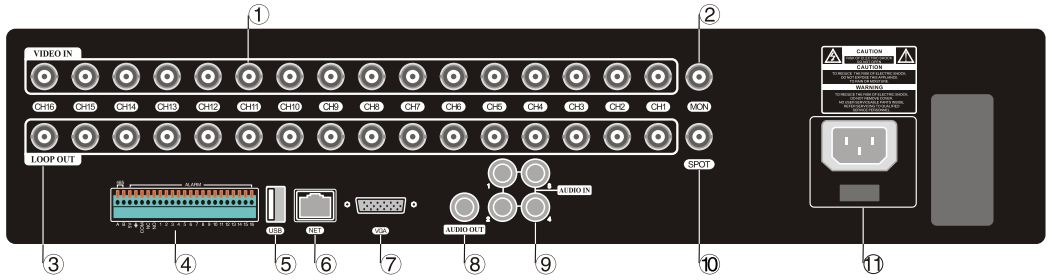
Rear panel of 4 channel H.264 DVR:



Rear panel of 8 channel H.264 DVR:



Rear panel of 16 channel H.264 DVR:

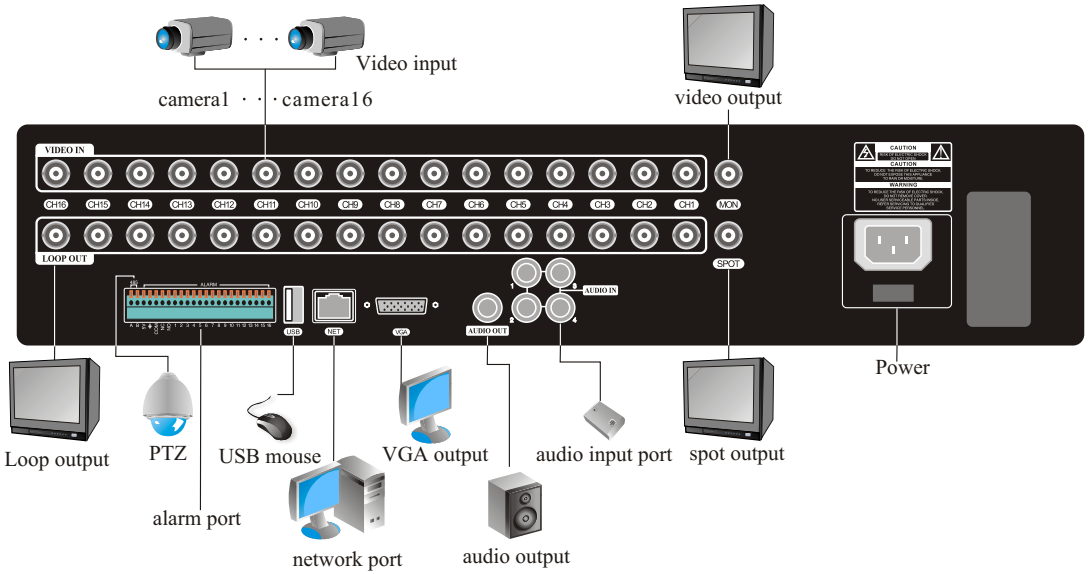


No.	Port	Description
①	Video input	Standard BNC port, connected with the camera and speed dome.
②	Video output	Connected with the video input of the monitor.
③	Loop output	Standard BNC port, connected with the monotor etc.
④	"485" port External alarm port	RS485 devide into A and B. it can control PTZ via the mouse, remote control and network ClientConnected with alarm inout and output.

⑤	USB	Connected to USB pendrive or mouse and used for system software upgrade or video file backup; Itsupports hot plug.
⑥	NET	Standard RJ-45 network port, connected to network cable and used for remote browse or control.
⑦	VGA	VGA video signal output port, connected with the VGA port of a computer monitor.
⑧	Audio output	Connected with earphone or cable speaker.
⑨	Audio input	Connected with audio input device, e.g. microphone.
⑩	SPOT port	Connected with spot output device to view the live image independently.
⑪	Power	AC 220V or 110V.

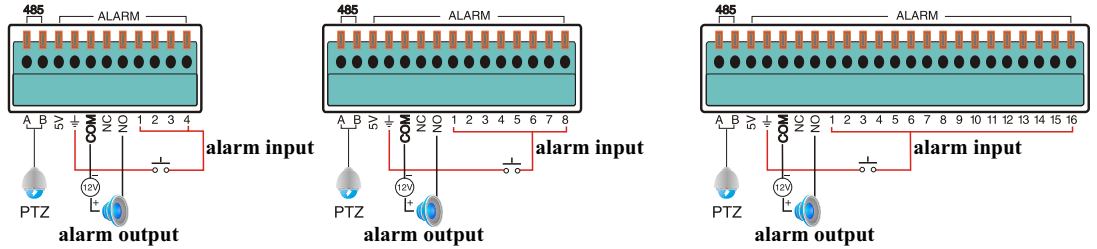
2.3 Connection figure of rear panel

Take 16 channel DVR as example to show how to connect.



2.4 Description of alarm port in the rear panel

Connection figure of alarm input and output.



Description:

(1) "1-16" is alarm input. "NC/NO/COM": Alarm relay output. NC is normal close, NO is normal open, COM is the public terminal.

(2) " ⏚ " It is ground wire.

Prompt: To make the machine work well, please follow the above figures to connect. Please power off each device before connection.

2.5 Remote control operation

1. Installing the remote control

Open the battery cover, install two batteries (Type No.7), make sure positive and negative poles are right, then close the battery cover.

2. Using the remote control

Before using it, please confirm that batteries have been installed correctly.When using it, please aim IR TX (transmitter) of the remote control at IR reception of the DVR.Then the IR light in the front panel is on and the icon on the top-right of the monitor screen turns to blue " " The DVR can be controlled by the remote control.

Note: If you don't want to use the remote control, you could set in the system setup menu. Set the item REMOTE ID as OFF. Then the IR Receiver light in the front panel will be off and the operation of the remote control is invalid.

3. Trouble shooting

If the DVR can not be controlled by the remote control, please check the following aspects:

① Check the positive and negative poles of the batteries.
② Check the electric quantity of the batteries.
③ Check that whether Remote Sensor are blocked or not.
④ Whether Fluorescent lamps are being used or not nearby.

Function description:

NO.	Key	Name	Description
1		Power	In normal running mode, press " " key to pop up a menu to prompt whether to turn off. The DVR will be turned off . Press the key about 3 seconds, the DVR will start.
2		Audio	Audio setup menu will pop up.
3		Number	Select channels or set up password.Input nunber 0. Press it twice to select channel 10. Combined number keys 1-9 to select the channels from channel 11 to 16.
4		Lock Remote ID	Lock the machine or change the user. Control the machine by remote control.
5		Record Play&pause Stop Info	Press【•】key to enter record mode. In live or record mode, press it to pop up search menu, select a video file to play. Press it to play, press it again to pause. Press it to stop playing. Press it to pop up information menu.

5	▸▸ ◂◂	Forward Rewind	In playback mode, press 【▸▸】/【◂◂】 key to play images forward or backward at 2X speed. Press it twice to play at 4X speed. Press it third time to play at 8X speed, four times for 16X, five times for32X, six times for 64X,
6	▲ ▼ ◄ ►	Direction	To move the cursor up/ down/ left/ right to select items or modify data. And control PTZ to move.
	↵	Confirm	Confirm the operation.
	ESC	Exit	Cancel the operation and exit.
	MENU	Menu	Enter into the main menu.
	⊞	Quad	The monitor display quad-screen. Press it to set preview point in PTZ mode.
	▦	Eight-split	The monitor display eight-split-screen. Press it to preview in PTZ mode.
	▦	Sixteen-split	The monitor display sixteen-split-screen. Press it to decrease the data in PTZ mode.
7	SEQ	Sequence	In live preview mode, press this key to automatically switching full screen images.
	SPOT	Spot output	Press it to increase the data in PTZ mode.
	PTZ	PTZ	In PTZ control mode, press it to move the cursor among the digital in the screen.
	AUTO	AUTO	Enter into PTZ mode. Press it again or press【ESC】key to exit.
	Z+/Z-	Zoom in/out	In PTZ control mode, this key is used to zoom in/out.
	F+/F-	Focus	In PTZ control mode, "F+/F-" key is used to prolong/ shorten the focus.

7	I+/I-	IRIS	In PTZ control mode, "I+/I-" key is used to enlarge/ reduce the iris (aperture).
8	CRUISE FOPEN FCLOSE	Standby	

2.6 Mouse operation

USB mouse can be used. Hot swap for mouse is supported. Move the mouse cursor onto the mouse icon to see the name. Please insert the usb mouse into the usb port of the rear panel.

Left-click the mouse	① Select or cancel " √ " in the item. ② Input password in user log in interface. ③ Click the close icon on the top-right of the screen to exit from the main menu. ④ In split-screen mode, click one of the channels to make it full screen. Click it again to return to split-screen. Switch single channel screens. ⑤ Switch single channel screens.
Right-click the mouse	① In live or playback mode, it could swich the single channel image. ② In menu mode, it could modify the data.

Move the mouse	① Move the cursor. ② Move the cursor to the bottom of the screen to pop up the mouse tool bar. Move the cursor onto the icon to show the name.
Drag the mouse	① To select shield area in "Camera setup". ② To select motion detection area in "Motion alarm".
Mouse wheels	To change the value or digital in menu mode.

Chapter III Menu Setup

3.1 Summary of menu operation

In live preview mode, select【menu】key in the remote control / the front panel or click " " icon in mouse menu to enter the main menu. Press【ESC】key or click the 【close】 icon that on the top right of the menu to exit from the main menu. Main menu is as follows.

Please press【◂◂】/【▸▸】in the front panel【◂】/【▸】in the remote control or left/right-click with the mouse to change the parameter value in the sub-menu. Press【▲】/【▼】key in the remote control or in the front panel to move the cursor or move by the mouse. Click" SAVE "to save the value and click " EXIT " to exit from the menu.

Main menu

3.2 System setup

(1) Time setup: used to adjust the system date and time.

(2) Time format: used to set the format of date display, Asia/Europe/America are optional.

(3) Time DISP POS: display position of time and date, top middle / bottom middle / no display are optional.

(4) Border DISP: to select the color of borders, green/black/white/off are optional.

(5) Video format: to select the video mechanism, PAL/ NTSC are optional. The DVR system will be forced to rest-artafter switching

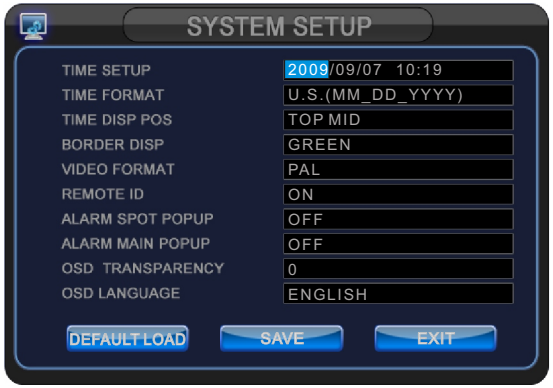
(6) Remote ID: used to set the remote control ID corresponding to the current machine so as to make remote control, off/ on/ numbers from 0 to 9 are optional.

(7) Alarm spot pop up: on/off. Open or close the function.

(8) Alarm main pop up: on/off. Open or close the function.

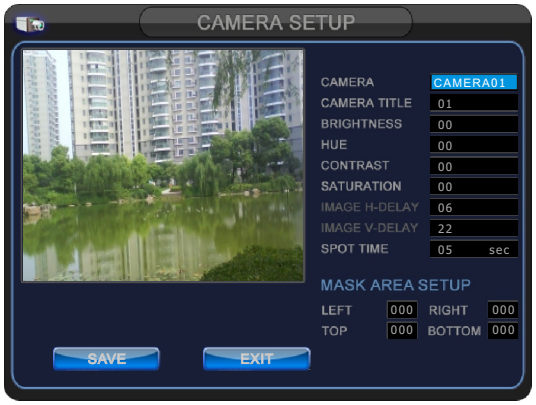
(9) Transparency: set the transparency of the menu. The larger value, the higher transparency.

(10) OSD Language: display the language of the operating system.



3.3 Camera setup

(1) Camera: used to select the channel to be revised parameters.



(2) Camera title: used to set the camera title. Press【↵】key in the remote control / the front panel to turn into bitmap, the camera title couldn't be changed.

(3) Brightness: used to adjust brightness of the channel. (4) HUE: used to adjust Hue (chroma) of the channel.

(5) Contrast: used to adjust contrast of the channel. (6) Saturation: used to adjust acutance of the channel.

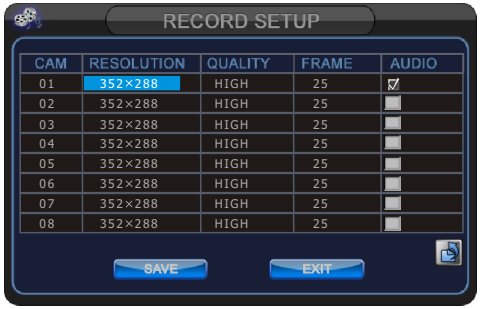
(7) Sopt time: set the time interval of spot output for the correspond channel, i.e. the display time of each channel.

(8) Mask area setup: Mask area: to shield some area by black square. It will turn to black in surveillance or record mode.

(a) Left: set the left border for mask area. (b) Right: set the right border for mask area.

(b) Top: set the top border for mask area. (d) Bottom: set the bottom border for mask area.

3.4 Record setup



(1) Resolution: 352×288（PAL）; 352×240（NTSC）. 4 channel and 8channel DVR could be changed into D1 resolution: 720×576（PAL）; 720×480（NTSC）

(2) Quality: the higher video quality, the larger occupied HDD space.

(3) Frame rate: used to set the quantities of images that recorded in one second. 25fps (PAL) and 30 fps (NTSC) is real time recording.

(4) Audio: used to turn on or turn off the audio record. This DVR support 4 channel audio, so click 5~16 channel audio is invalid.

3.5 Schedule setup

(1) Camera: used to select the channel to be set. The parameters are effective for all channels after selecting" All CAM".

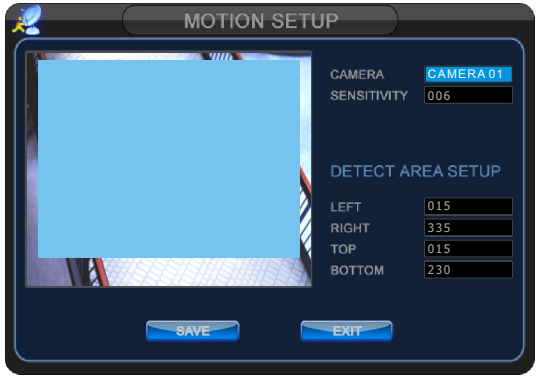
(2) Day: used to select the day of video schedule. The parameters are effective for all days after selecting "All DAY".

(3) Segment 1-4: set corresponding video type of relevant time range. The time could be set from 00:00 to 24:00. Record type could be "time/alarm/motion/alarm+motion".

Note:

- **The start time must be earlier than the end time, or it will report error and won't exit.**
- **After exiting from this menu, please press【REC】key or click the record icon, or the schedule record won't startup.**

3.6 Motion alarm



(1) Camera: used to select the channel to be set.

(2) Sensitivity: low / high optional from "1-10". The bigger number, the higher sensitivity.

(3) Detect area setup: drag the mouse to set the detection area as light blue square. When motion occurs, the area turn to red.

3.7 PTZ setup

(1) Camera: to select the channel to be set.

(2) Baudrate: to set baudrate corresponding to the current channel PTZ.

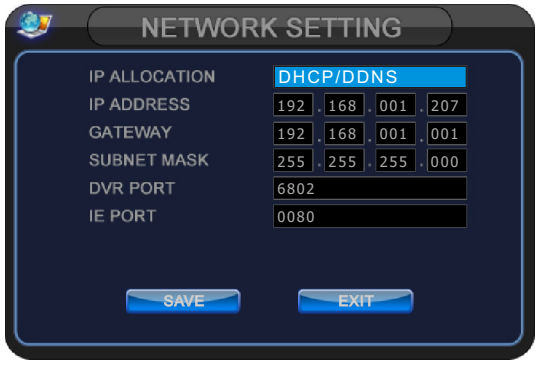
(3) Device ID: to set ID address corresponding to the current channel PTZ.

(4) Protocol: set communication protocol corresponding to the current channel PTZ.

Note:

the above parameters of each channel must be consistent with the setting of PTZ , or it cann't be controlled.

3.8 Network setup



(1) IP allocation: STATIC and DHCP/DDNS optional. (In static mode, please set IP address, gateway and subnet mask. In DHCP mode, DVR could get IP from DHCP server. Please refer to the "Client and network manual" in the accessory CD.)

(2) IP address: It must be unique to avoid colliding with other DHCP.

(3) Gateway and subnet mask: Gateway is the LAN IP address of the router.

(4) DVR port: Transfer date stream, such as video and audio frequency.

(5) IE port: Download ActiveX control. (Default 0080).

Note: When using network browse, IP address/gateway/subnet mask/port of the DVR must be consistent with the setting of the router.

3.9 Alarm setup

There are two ways for alarm output, Buzzer and Relay. They include three alarm modes:

(1) Video loss alarm(Loss);

(2) Video motion detection alarm(Motion);

(3) Sensor input alarm(Sensor).

Setup way: Press【 ↵ 】key on the remote control or click with the mouse to display or cancel " √ " in the small boxes.

"" /"" is page turning icon.

3.10 Disk management

(1) Overwrite: If click " √ " the previous recorded video will be replaced in turn when the hard disc is full. If not, record will stop. When you record again, the system will prompt: open overwrite function or format the hard disk.

(2) Disk name: select Disk.

(3) Disk capacity: used to display capacity of the current disk.

(4) Remain capacity: used to display percentage of the remaining capacity of the current disk.

(5) Bad area: used to display bad size of the current disk.

(6) FORMAT : used to format the current disk.

Note: You'd better format the hard disk before the first recording to protect the record video file.

3.11 User setup

Password is needed to log in by admin. Input the password by click the numbers in the menu or press the numbers in the remote control / the front panel."⇦" is used to clear the former Number. "C" is used to clear all Numbers. Then click "OK" to enter "USER SETUP" menu.

(1) User name: ADMIN0, USER01, USE02 and USER03 are optional and changeable. ADMIN0 is default administrator account.

(2) Password: set separate password for each user. Factory default setting: ADMIN:000000, USER01:111111, USER02:222222, USER03:333333.

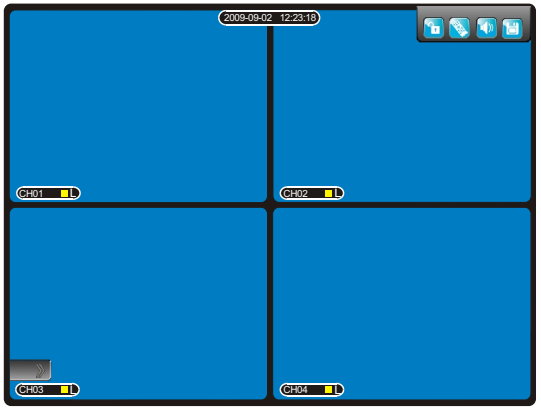
(3) Permissions: set the operation permissions for users by admin. Users can't operate the function which does not be selected.

Note: If the DVR is locked, " " will display in the top right of the screen. Click the icon to input password. If the icon turns to " ", DVR is unlocked.

Chapter IV Basic Operations

4.1 Turn on DVR

- Please confirm each item in "AUTION" has been done before turning on DVR.
- Please check whether the system connection is correct, input / output equipments are connected well and the power supply is on before turning on DVR.
- Please make sure video format (PAL or NTSC) of video input and the monitor format meet the requirements.
- After checking without problems, plug in the power cable of DVR, then turn on the power switch on the rear panel of DVR.
- If it is in video recording mode before turning off last time, it will resume video recording automatically when the DVR is turned on again.



4.2 Live screen

(1) Turn on the DVR, you could see the live screen. If no video input, the screen is as above: (Take 4 channel DVR as example.)

(2) Channel name and record mode icon display in the bottom left of each channel.

Description of record icon and mode:

Icon	Color and symbol	Mode description
M	Red M	Is is recording by motion alarm.
S	Red S	It is recording by sensor alarm.
L	Red L	Image lost in the process of record.
T	Red T	It is recording by time.
I	Green I	DVR is waiting for video event triggered in auto recording mode.
L	Green L	Image lost in the process of waiting for record.
?	Yellow ?	No record.
L	Yellow L	Image lost in no record mode.

(3) Icons in top right of the screen:

Icon	Name	Description
	Lock	Unlocked. Click it to lock. Locked. Click it to login by inputting password.
	Remote IR	Remote control is opened. Click it to close. Remote control is closed. Click it to open.
	Audio	Audio output is open. Click it to enter into audio setup menu. Audio output is closed. Click it to enter into audio setup menu.
	Infomation	Hard disk is normal. Click it to pop up info menu. Hard disk is full. Click it to pop up info menu. No hard disk. Click it to pop up info menu.

(4) Move the mouse cursor to the icon " " in the bottom left of the screen. Mouse tool bar will pop up as follows.(Take 16 channel DVR as example)

Icon	Name	Description
	Split-screen	Click it to display quad, nine-split-screen and sixteen-split-screen.
	Record	Click it to starting recording.
	play	Click it to enter the menu of search & playback.
	Stop	Click it to stop recording or stop playing and return to the search menu.
	Main menu	Click it to enter into the main menu.
	PTZ	Click it to enter into PTZ control interface.
	SEQ	Click it to switch channels in sequence per 5 seconds.
	SPOT	Click it to enter into SPOT output setup interface.
	Power	Click it to pop up a menu for turning off the power or not.

4.3 Software update

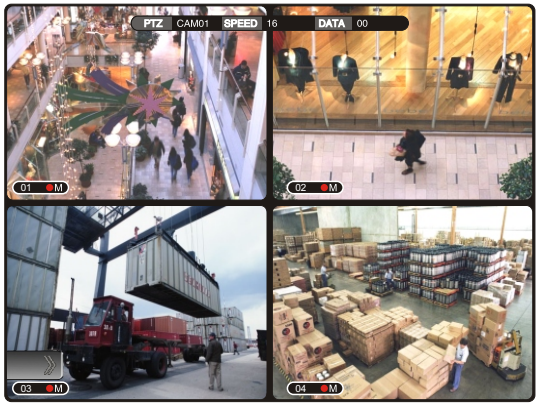
- Copy the new version software to the root directory of USB pendrive, the file name is **fireusb**.
- Turn off the DVR. Insert the USB pendrive with software into USB port in DVR front panel, then power on again. 30 seconds later, it will pop up "Software updating" and "Time: s" on the screen, the system update automatically. When "Update ok, reboot please!" pop up on the screen, update is finished. Please pull out the U disk and restart

the machine. If "Update fail, try again!" pop up more than 4 times, please contact after-sales service department to deal with it.

- In the process of update, please ensure no power breakdown and don't pull out USB pendrive, or update will be unsuccessful.
- Make sure U disk works in good condition so as to avoid abnormal performance in the process of update.

4.4 PTZ control

In live or recording mode, press【PTZ】key in the remore control / the front panel or click the "" icon in mouse menu to enter PTZ control interface.



Characters "PTZ: CAM01 SPEED:16 DATA:01" display on the top of the monitor screen, indicating the DVR is under PTZ control. PTZ control parameters of each channel can be modified in the system menu. Press【**PTZ**】key again or press【**ESC**】key or click the icon " " to exit from PTZ control mode. When the mouse moved to the bottom of screen, it will display the following icons.

Please check the following table for the symbol of these icons:

Icon	Description	Icon	Description
	Direction icon. Control the camera to turn up, down, left, and right.		Control the dome camra to rotate automatically. Click the icon again to stop it.
	Zoom icon. Control the focal distance of zoom		Preview preset key.
	Preset key.		Shut off PTZ menu.And exit from PTZ control.

Modify the parameter:

When the cursor is on "PTZ:CAM01 SPEED:16 DATA:01" , you could select camera,set the speed and preset the

data of image point. Select the item which need modify by pressing【**SPOT**】key in the remote control or clicking the item directly with the mouse.Then change the data by pressing【 ⊞ 】/【**SEQ**】in the remote control or left/right-click with mouse.

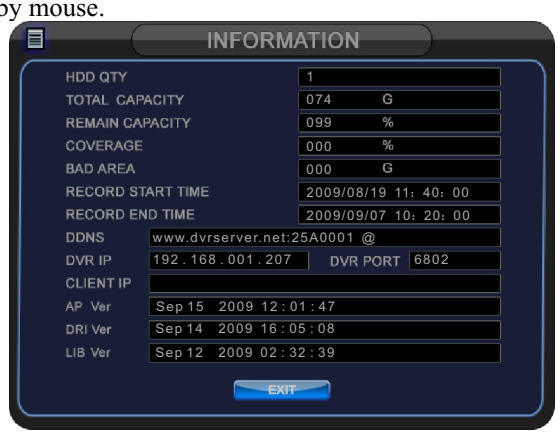
Preset operations (include set and view**)**

(1) Select image point in the selected camera by "↑↓←→" key, set a number for the image point in "DATA", such as 01, then press【 ⊞ 】key on the remote control or click "" icon. Set is finished.

(2) To view of image point which has been preset,you could select the corresponding number in "DATA", then press 9ch split key 【 ⊞ 】 on remote control or click "" icon by mouse.

4.5 System information

Press【**INFO**】key or click the icon "" with mouse, it will display the interface of system information as following.



(1) HDD QTY: the number of the hard drive which connected with the DVR

(2) Total capacity: total size of all hard drives in the DVR. DVD-RW not included.

(3) Remain capacity: percentage of the remain size of hard drive.

(4) Coverage: percentage of overwriting of hard drive.

(5) Bad area: bad size of the hard drive.

(6) Record start time: the earliest record time.

(7) Record end time: the latest record time.

4.6 Log list

Press【INFO】key twice to pop up log list menu.

It is used to check the information of power on/off and recording etc. Set the time segment, then click "Search", it will display the information.

4.7 Recording preparation

- Make sure all the equipment is power on before recording. Make sure that there is video input and test audio in put by live monitoring.
- Press【INFO】key to check disk information and the remaining capacity of the hard drive. If there isn't much capacity left,pls firstly consider to replace hard drive, backup the video or overwrite the video.
- If necessary, enter the "RECORD SETUP" to set audio recording,video image quality and recording frame rate.
- If DVR is equipped several hard drive, please enter "DISK MANAGEMENT" to check the hard drive information

by press【 ◂◂ 】/【 ▸▸ 】key in the front panel or press 【 ◂ 】/【 ▸ 】key in the remote control or click disk name with mouse.

4.8 Recording operation

- Firstly confirm that recording mode of each channel in schedule setup(time/alarm/motion/alarm+motion) and time segment setup.
- Start recording: Press the key【 ● 】in the front panel / remote control of DVR to start recording. Or click the icon "" by mouse.
- When DVR is under recording, the HDD light in the front panel will flash. Please select the recording channel according to fact need so as to save more HDD capacity.
- It will be back to live when you press icon【 ■ 】 in the remote control / the front panel. Also you could click icon "" by mouse to be back to live. Press【 ESC 】key and select " YES" to stop recording.

4.9 Search,playback and backup

Press【 ▸| 】key or click " " icon in live or record mode to enter search menu.this menu is used for search, playback and backup video file. Adjusting time to search and select video file.

(1) Valid time: It shows the valid time from the earliest recording time to the latest recording time.

(2) You could select any four channels to playback simultaneously as you like or single channel to playback by select the number in the CH box. Press 【 ↵ 】key in the remote control or click "" icon with the mouse to playback 8 channel simultaneously.

(3) Backup device: You culd select DVD(1.5G) or USB pendrive in device item. The maximum capacity for DVD disk should not exceed 1.5G.

(4) In option of date and start time, input the date and time you need to play, you could press【◂◂】/【▸▸】key in the front panel or press【◂】/【▸】key in the remote control to select the start time. Or you could use mouse to drag the arrow "▼" under the time scale to select the start time, and click the icon "PLAY" to playback. When playback finshed, it will turn back to the search menu automatically.

(5) CALCULATE: Before backup, please calculate the capacity of the video first. Click the icon "CALCULATE" to calculate the video you need to backup. If the video capacity is large, it will remind you waiting until calculation finished.

(6) BACKUP: Before backup,please connect the backup device to DVR, e.g. USB pendrive, USB HDD , etc. You

could select the time segment you need to backup with mouse. And click the "Backup" icon to start backup. The process will last for a few minutes. When backup finished, please remove the device from DVR.

(7) Please note that the size of video file should not exceed the maximum capacity of backup device. If system cannot find backup device, it will be back to search menu.

(8) On the bottom of screen, it will display the playback mode:

PLAY normal speed playback PAUSE pause. STOP stop playback.

FAST ×2 / FAST ×4 / FAST ×8 / FAST ×16 / FAST ×32 / FAST ×64

Twice/4 times/8 times/16times/32 times/64 times forward.

BACK ×2 / BACK ×4 / BACK ×8 / BACK ×16 / BACK ×32 / BACK ×64

Twice/4 times/8 times/16times/32 times/64 times rewind.

When you move the mouse cursor to the bottom of screen,it will display mouse icon while it is under playback:

" " click this icon to fast rewind when playback. " " click this icon to fast forward when playback

Note: This DVR could not support sixteen channels playback, so clicking " " is invalid.

4.10 Audio setup

Press the【**AUDIO**】in the front panel or press the【 】key in remote control or click the icon " " with mouse to enter audio setup interface.Take 16 channel DVR as example.

(1) Mute: Select mute, then there is no audio output in live mode and the audio icon will turn to " " . Press " ENTER "key to save this setup.

(2) Network: select network audio output.

(3) It supports 4ch audio input and 1ch audio output. Click "5~16" CH is invalid.

Note: No audio output in 4 or 8 channel playback mode.

4.11 SEQ

Press【**SEQ**】in the remote control / the front panel. or click the icon " " . with mouse to start SEQ. Then it

will display the icon " SEQ " on top right of screen. It will switch automatically between 1 channel, quad, 8ch and 16ch.The interval is 5 second. Click the icon " " with mouse or press 【SEQ】 key in the remote control to end SEQ.

4.12 Spot output

In live preview mode, press 【SPOT】key in remote control or click " " icon with mouse to enter SPOT output setup menu. Take 16 channel DVR as example.

(1) AUTO: After select this item, the system will output sequence image according to default SPOT out put interval time. You could set the time for SPOT output as the following operation.
Enter "Camera setup" menu. Move the cursor on "SPOT TIME", then you could set the time by pressing【◄】【►】key or left/ right-click with the mouse. It could be set as 0 second or 5--30 seconds. If output interval of some channel is 0 second, that channel won't output. For example, 8 seconds for channel 1, 0 seconds for channel 2, 3 seconds for channel 3; then in spot output mode, channel 1 will turn to channel 3 after the image displaying 8 seconds, channel 3 will turn to the next channel after the image displaying 3 seconds and so on.

(2) If any channel from CH1 to CH16 is selected, the image of those channels will be spot output.

Note: Video input is necessary for Spot output.

4.13 User login

Press the【**Lock**】key on remote control or click the icon "" on the top right screen with mouse, the icon will turn to red "". It means the system is locked. Then you need to press【**Lock**】/【**ESC**】key in the remote control/ the front panel or click the icon "" with mouse to enter user login interface.

Press【◂◂】【▸▸】key in the front panel or【◂】【▸】key in the remote control or click the "User name" box with the mouse to select user name and input password. Please refer to "3.11 User setup" for specific operation.

4.14 PC Client software instruction

You could control the DVR via client software on PC. Please refer to < Client and network manual> attached in CD.

4.15 Power off

Normal power off: Stop all the operations, press " " in the front panel / remote control or click " " icon on bottom left of screen. And select " Enter " to make it power off. When power off, the" Power" LED light will turn green. If you want to restart DVR, press the " " in the front panel / remote control for 3 second and it will power on.

Abnormal power off: Abnormal power off refer to shut off the power supply when it is running(especially under recording). Please try your best to avoid such accident.

Appendix 1 Technical parameters

Items	4CH H.264 DVR	8CH H.264 DVR	16CH H.264 DVR
Video input	1.0Vp-p/75Ω,BNC×4	1.0Vp-p/75Ω,BNC×8	1.0Vp-p/75Ω,BNC×16
Video output	① 1.0Vp-p/75Ω,BNC×1 ② VGA output×1		
Alarm input	4ch opto-coupler input	8ch opto-coupler input	16ch opto-coupler input
Alarm output	Relay output,NO,NC,COM		
Alarm mode	Sensor alarm, motion detection,video loss,HDD full alarm		

Items	4CH H.264 DVR	8CH H.264 DVR	16CH H.264 DVR
Live resolution	720×576(PAL) ; 720×480(NTSC)		
Record resolution	352×288/ 720×576 (PAL) ; 352×240/720×480 (NTSC)		352×288(PAL)352×240(NTSC)
Audio	Av×4ch input, BNC×1ch output		
Network port	RJ-45		
USB port	HOST 2.0 in front panel, HOST 1.0 in rear panel		
HDD port	SATA		
PTZ control	RS485		
Power	AC 220V / 110V		

Appendix 2 Trouble shooting

FAQ:

1. Why cannot detect hard drive?

Default cause: The HDD power line or data cable is not connected well.

Resolution: Please check the power cable and data cable. And format the HDD.

2. **Why the remote control not work? But the mouse is workable.**

   Default cause: The remote control ID was set "OFF" in system menu. Or it was set wrong ID.

3. **Can we delete a part of video file in HDD?**

   No, it can't be done. For the reason of safty, we can't delete a part of video file in HDD. If you want to delete them, please try to format HDD.

4. **Why alarm is not workable?**

   Default cause:① The schedule setup is wrong. ② Alarm setup is wrong. ③ Alarm cable connection is wrong. ④ Alarm input signal is wrong ⑤ It is not recording.

5. **Why cannot find the video file in search menu after recording?**

   Default cause: ① The time segment for search is wrong. ② HDD cable is not connected well. ③ System date was wrong. ④ The system format was changed.

6. **Why there are no video output when connect DVR with camera?**

   Default cause: ① BNC connector not connect well. ② The system format is different between DVR and camera. ③ Modified the system date back.

NOTE

- The operation manual is for reference only. Products may vary
- Products are subject to update without further notice.
- Please contact the customer service department for latest program and supplimentary informaton
- Any disputes or doubts in products description are subject to our final explanation.